UTILITIES TOUR

WALKING TOUR Start 8:00 - 8:15

STOP 1

- Immediately outside of OSE back door
  1. Stanchion lines, OSE Substation
  2. Some area lighting poles, etc

Stop 2

- Powerhouse
  1. Capacitor Banks
  2. DP&L Switches
  3. Substations
  4. Natural Gas Line Overhead to underground for OSW/2 boilers
  5. Compressed Air
  6. 6 Chillers

Stop 3

- Powerhouse rear and other side
  1. Cooling towers
  2. Fuel Oil Tank
  3. Water Tower (100,000 gal)

Stop 4

- Behind P Building overlooking valley
  1. Overhead Stanchion lines for all 3 loops as you go around
  2. SM/PP & Test Fire Valley Stanchion Lines
  3. East Power Line Feed to SM/PP (Overhead)
  4. West Line is located underground
  5. Benner DP&L Power Feed (transition to UG at P Building)
  6. Overhead Electric in Building 29 is temporary feed to Substation F
  7. Telecommunications

Stop 5

- Walking to DS Point
  1. Street Lights
  2. DDC Lines
  3. E Substation
  4. R-2 Substation (on roof)

Stop 6

- DS Point (platform over Stanchion Line)
  1. Test Fire Substations
  2. Various street lighting, telephone cables
  3. Cover storm drainage and location of ponds
  4. SM/PP Water Tower
  5. Building 95
  6. DP&L Feeder (Again)
  7. Buildings on right feed from 87 substation.

Stop 7

- DS walking to OSW Parking Lot
  1. DP&L Manning Feeder on left from across river
  2. Streetlights along the way
  3. Along fence to left is streetlights

- Temporary Feed

Stop 8

- OSW Parking Lot
  1. Streetlights UG Feed
  2. Manning line (2nd) DP&L Feeder

Stop 9

- Back to OSE - Bus Tour Starts 9:15 - 9:45
  1. Point out Stanchions
  2. Point out overhead lines various by GH Parking lot
  3. General Site on way to other hill
  4. Upper pond by Building 61
  5. By Building 50 - Natural gas main at Mound Road
  6. Natural gas line overhead

Stop 10

1. SM/PP Water tower (250,000 gal.)
2. Building 95, cooling tower, transformer, 2 chillers
3. Show general stanchion lines

Stop 11

- Overflow Pond/Deep Wells/Discharge Point

Stop 12

- Sewer Plant (6 Buildings: 57, EG8, 112, 113, 415, 432)
  1. Show miscellaneous
  2. Building 24 (water conditioning)

Stop 13

- WD Building/Building 56/350,000 Gal. water tank

Stop 14

- HH Building (East/West Bus)

Stop 15

- OSE Tour ends 10:45 - 11:00

Bldg A Administrative, Personnel, Medical 55,582sf
The building is a two-story structure with a one-story annex and a basement. It is made of reinforced concrete block with brick facing and a built-up membrane roof. Windows are aluminum. The building has heating and air conditioning systems with central steam, chilled water,
and electrical service of 480V. Building A is located between, and connected to, Buildings OSW and OSE. Offices are on the first and 2nd floors, with the medical facility on the first floor. The basement is a "Q"-cleared area, containing the Classification Office and Document Control. This building has been used for the same purpose since construction. No research, development, or production activities using radioactive or energetic materials have occurred in the building.

Bldg B Inert Production 27,735sf
Building B, as it remains, is a 27,735 concrete slab and related foundation components. The slab is located adjacent to Building 58 and OSW.

Bldg B-Stack B Stack & Fan House 328sf
Building B Stack is a brick and mortar stack 102 feet high with an outside diameter of 9 feet at the base tapering to 5 feet at the top. The Stack Fan House is a 255 square foot, brick building that contains the fan and controls for the stack. Building SW, Room 8, and Room 9 had utilized the stack, but it is currently inactive. The Stack and the Fan House were both radiologically contaminated with polonium-210, uranium (depleted and enriched), and tritium. The relatively short half life of polonium-210 (~140 days) eliminates it from being a concern. The Building B Stack is also designated as PRS 252.

Bldg H Laundry 17,334sf
Building H is a reinforced concrete block building with face brick and a built-up membrane roof. The building consists of one story with a penthouse. The building has central steam for heat, chilled water, and electrical service. Building H houses the laundry facilities for both uncontaminated (cold) and historically contaminated (hot) clothing for Mound. The water generated from the laundry was collected in a holding tank on the "hot side" of the building. Then the water was drained through a pipe to a lift station at Building SW. In 1993, Building H discontinued the washing of contaminated clothes. These washable clothes were replaced by disposable clothing and wastewater was then diverted to the sanitary disposal plant, Building 57. Building H previously held a small maintenance shop. The maintenance shop has been removed, and the Bioassay Laboratory currently uses this area for storage. The building is known to be contaminated with radioactive materials. Building H currently houses a laundry, bioassay laboratories, change rooms for men and women and office space. The space is currently being vacated in preparation for future demolition activities.

Bldg 99 Security Operations Facility 11,412sf
The facility is a four-story reinforced concrete building with a brick facing and a built-up membrane roof. The building was constructed in 1989. The first and second floors of the facility have been used as administrative areas for security personnel. The first floor also contains a locksmith shop and communications center. The third floor houses the Emergency Operations Center (EOC). The fourth floor is a penthouse used as a mechanical room. The building has been used for the same purposes since construction.

Bldg 40 Print Shop, Technical Manuals 12,227sf
The facility is a concrete block, slab-on-grade structure with brick facing and a concrete floor on the upper floors. The annex was added in 1993. The roof is asphalt and metal built-up membrane. The building is serviced by central steam for heat and chilled water and electrical service of 240V.
On the first floor of the structure (approximately 6,150 square feet) was printing and microfilming shops and a vault for document storage. Offices were located on the second floor (approximately 3,880 square feet). The third floor (approximately 2,170 square feed) houses utility services with interstitial space between the ceiling and roof for duct work. The building has been used for the same purpose since construction. No research, development or production activities using radioactive or energetic materials are known to have occurred in the building. The building is currently vacant.

Building G Garage 7,518sf
Building is a slab-on-grade one-story concrete block building with brick facing and a metal built-up membrane roof. The building has central steam for heat, chilled water, and electrical service.
Building G currently services 137 fleet vehicles and 26 pieces of heavyduty equipment. The facility is overcrowded with supplies and equipment.

Bldg GW Old Receiving/Inspection) 9,782sf
Building is a slab-on-grade (first floor) two-story reinforced concrete block building with brick facing and a built-up membrane roof. This building was originally built to house offices, bonded stores, and receiving/inspection for weapons programs. It now houses long-term record storage and offices.

Bldg W Maint. Offices & Shops (old whse) 32,484sf
Building W is a two-story, reinforced concrete elevated slab-on-grade (first floor) structure with brick facing, loading docks and a built-up membrane roof. There are offices on the first and second floors in addition to the maintenance shop work areas. The building has central steam, chilled water, electrical service, and a fire sprinkler system. The facility was initially utilized for warehouse space with the addition being used for office space. It is currently used as office space and shop space (welding, sheet metal, carpentry, etc.). The shop areas contain large volumes of stationary and portable tools, along with supplies and materials used in the maintenance of facilities including table saws, metal working equipment, welding, etc.

Bldg 47 Security (OldCentral Fire Station) 3,610sf
The facility is a slab-on-grade reinforced concrete structure with access stairs and loading dock. It has brick facing and a built-up membrane roof. Building 47 contains a mezzanine for HVAC equipment. Services to the building include electrical, water and sewer. The building was originally utilized as the plant fire station. Since 1987 to the late 1990's, the building housed administrative offices for protective security personnel, weapons storage areas, and classified waste storage areas. The building has been recently renovated to serve its original purpose as a fire station allowing Building 98 to be demolished as part of the PRS66 cleanup. The fire department currently uses this facility as for personnel offices and equipment storage.

Bldg 60 Ceramic Facility 3,958sf
The facility is a two story facility with a 1st floor slab ongrade floor. The structure is a brick faced reinforced concrete building with electric. Centralized heat and cooling has been valved off.
The facility was used for ceramic development and non destructive testing since its construction. The building has been leased since 1995.

Bldg P Power House-Central Utilities 15,143sf
The power house is a one story (high bay) structure with mezzanine which contains the facilities and equipment necessary to provide centralized process and breathing air, steam and condensate, chilled water supply and return along with treatment of raw water (potable) and electrical power distribution. The building is a reinforced concrete/steel frame structure with brick curtain wall. The building systems (external to facility) include a water tower, the power plant's chilled water evaporator towers (including sumps and pumps), and a new 50,000 gallon above ground storage tank and metal bulding containing pumps for no. 2 fuel oil on the east side along with Mound's West electrical substation which is immediately adjacent to Building P. Concrete pads and slabs around this area is considered as part of the facility. The facility provides space for the centralized process and breathing air steam and condensate, chilled water supply and return along with treatment of raw water (potable) and electrical power distribution. The Mound East electrical substation is located within Room 3, on the first floor of Building P. Both receive power from three parallel DP&L 12.5 KV feeders. Electrical power is then distributed throughout Mound to
each substation. In addition to the office-related rooms the first floor contains the two main boilers, three chillers, potable water treatment equipment a standby generator, the main plant control/utilities distribution and consumption monitoring console station, chemicals/chemical injection equipment, and plant controls. The mezzanine principally contains pumps, compressors and two chillers. Asbestos containing material has been used to insulate piping and equipment within this facility.

Bldg PS Paint Shop 2,288sf
The facility was one-story metal building with a metal roof and slab on grade concrete floor. The building superstructure has been demolished leaving the slab and associated foundations for later removal. An electrical duct bank that contains 12.5kV feeders for Building T and another duct bank that contains the Benner Road Main Plant feeder runs under the remaining concrete slab of Building PS. This facility housed the paint shop with an OEPA-permitted paint spray booth. It contained processes conventional to painting such as brush painting and spray painting, storage of supplies (latex and non-latex paints), sanding, priming, and drying. The building also housed a sign fabrication area that made computer-generated signs. Slab removal and PRS closure remains to be completed.

EG-4 Standby Generator 240sf
Building EG-4 was a one-story metal structure with a metal roof. Electrical service was the only utility provided to the building. The Benner Road main Plant feeder runs under the facility. Only the foundation and slab on grade remains of the facility. The building housed a Caterpillar D348 diesel generator.

Bldg 25 Weather/Meteorological Station 430sf
Building 25 is a one-story slab-on-grade structure with brick facing. The roof is a metal deck with asphaltic built-up membrane. Building 25 has a heat pump and 240V electrical service. There is an aboveground, approximately 6,000-gallon capacity argon storage tank located north of the building, midway between Building 25 and Building PS. There are no sumps, separators, or catch basins in or around the building. A metal tower is located on the roof of the T Bldg. East Tower and for purposes of this description is considered a part of the facility which is to be domolished.
The building has been used for the same purpose since construction. It houses instrumentation that is used to collect meteorological information. Computers in the building receive data from two onsite weather-monitoring towers. These computers are connected to Lawrence Livermore Laboratory, where the information is used to predict dispersion patterns in the event of any airborne releases. The facility is currently in operation.

Bldg DS Standards, Labs, & Offices 47,810sf
Building DS is a one-story structure of reinforced concrete and concrete block with a built-up membrane roof and three penthouses, heating and air-conditioning systems are central steam and chilled water. The slab on grade foundation is supported by the use of piers and grade beams resting on the roof of T Building. The facility was used for metrology, laser technology processes and laboratories in R&D of nuclear components. The building is partially leased to the MMCIC with the portion of the residual used for offices by on site personnel. Demolition will be to top of slab only. Evaluation/timing due to the location and operations within T Building will need to
be conducted.

Bldg 46 Weld Development 2,440sf
The facility is a concrete block, slab-on-grade structure with a penthouse. The roof is metal with a built-up membrane of asphalt. The building contained specialized welding facilities that supported the heat source program. Welding development for energetic materials was also performed, along with machine shop activities which were conducted in the building. Currently Building 46 is not occupied. No research, development, and testing activities using radioactive materials have been known to have occurred in the building.

Bldg HH Isotope Separation 15,276sf
The building is a two story reinforced concrete block building. The building consists of a basement, a high bay, a cooling tower, an underground tunnel, three sumps, three penthouses, three adjacent buildings and two small attached buildings. Exterior components include spill containment area in back of building and foundation area for fuel oil tank. The main services for the building include central steam for heat, chilled water for cooling and electricity. The building originally built to receive and process highly acidic and highly contaminated liquid radioactive waste from the processing operations in Building T. This waste was processed to recover bismuth
for reuse. Liquid waste from this process was collected in a sump in the southwest corner of Room 6 and then sent via an underground line to WD Building (this pipeline was removed a few years ago). The polonium waste processing ended about 1958. In the mid-1950s, the building was also used for several projects involving the separation of Pa-231 and Th-230, as well as

other isotopes from some processed uranium byproduct materials obtained from other AEC operations. In about 1960, He-3 separation was started in Building HH using thermal diffusion columns. In the early 1960s, the building was used for the separation of a variety of stable isotopes using gaseous thermal diffusion, liquid thermal diffusion, and cryogenic processes. In the late 1970s, there was some experimental work done with uranium. A subcontract will be ongoing which will
provide demolition of the building superstructure. From about 1964 to about 1985, He-3 was separated in Rooms 17 and 18 using cryogenic carbon traps to remove the tritium from the feed gas. In the early 1980s, chemical exchange experimentation was also conducted in the building. The sulfur, calcium, and nitrogen isotopes were separated using packed columns.

Bldg 48 Surveillance (Old Proc. Mech. Fac.) 7,950sf
Building 48 is a reinforced concrete structure with a built-up membrane roof. Services to the facility include electrical, water and sewer. Offices are on the first floor (slab-on-grade), analytical laboratories and a machine shop were located on the second floor. The building was constructed in 1970. This building was renovated in the late 1999 timeframe to serve as the environmental monitoring laboratory. These operations are currently continuing.

Bldg 89 EM Storage 4,830sf
The facility is a two-story, reinforced concrete building with a membrane (coal tar) roof. The slab-on-grade first floor of the structure is a mechanical room. The second floor is a storage and process area. A reinforced concrete retaining wall supported a vechicle turning area
is considered as part of this facility. The building was orginally used for the storage of sealed energetic materials. Currently MMCIC uses it for general storage since leasing it in 1999. No research, development, or production activities using radioactive materials have been known to have occurred.

Bldg 125 Alpha Treatment System 2,200sf
The ATS facility is a pre-engineered metal building, 40 feet by 50 feet. The foundation is drilled piers 2 feet in diameter up to 25 feet in depth. The foundation/floor perimeter wall has a 12-inch curb to provide secondary containment. Plumbing/piping utilities include potable water fire water, compressed air, and process/sanitary sewer. HVAC/electrical utilities include heat pump, supply air fan, 480 volt, 400 amp service, transformer/120 volt distribution panel, phone line, fluorescent lighting, and fire alarm. An exterior slab and mechanism provides for receiving of tanker trucks for waste water input to the system. The Alpha Treatment System facility is located at Mound on a site formerly occupied by Building 79. The facility is considered a temporary building structure, mirroring the process done in Building WD, which was to treat any wastewater that had alpha radioactive contamination. This process is ongoing. This building will be incorporated into the
WD Demolition subcontract and will be ongoing at time of contact award.

Bldg 23 Waste Material Storage Center 3,422sf
The facility is one-story slab-on-grade, reinforced concrete block building with a built-up membrane roof. The building was modified in 1994 to contain spills by coating the floor and installing trenches and dikes. The services include central steam for heat, chilled water, and electrical service. The building was originally constructed as a warehouse for the staging and

shipping of low-level radioactive waste. The building was then used to store mixed and transuranic (TRU) mixed waste. The building is known to be contaminated with radioactive materials (Mound Facility Physical Characterization, 12-1-93). This building will be incorporated into the WD Demolition subcontract and will be ongoing on 1/1/03.

Bldg WD Rad. Liquid Proc./Waste Disp. 28,222sf
Since its construction, the building has been enlarged through the addition of an annex to the present size of 28,800 square feet. Building WD is a multistory building with penthouses, a full basement, and a partial sub-basement. It has an irregular shape, and is 22 feet high, 135 feet wide, and 211 feet long. The exterior walls of the building are reinforced concrete and concrete block. The roof is a concrete slab. Penthouses have lightweight block and aluminum-siding walls with
built-up steel roofs. Building services include heating and air conditioning by central steam and chilled water and electrical service of 480V. Building WD was the treatment facility for low specific activity (LSA) radioactive wastes generated by process activities at Mound. Processes which were housed within the WD facility include alpha wastewater treatment, beta wastewater treatment, laboratory and bench-scale research, LSA waste drum repackaging, a glass melter furnace, and a packed bed reactor. This building is incorporated into the WD Demolition subcontract and will be ongoing on 1/1/03. WD is a radiological facility with an approved ASA.

Bldg 56 Water Tank Pump House 613sf
The facility is a reinforced concrete slab-on-grade structure with a builtup membrane roof. It has central steam for heat, chilled water, electrical service, and a fire sprinkler system. It houses a diesel-powered fire suppression water pump station and a 500-gallon (above grade) fuel storage tank. The facility includes an at-grade 350,000-gallon metal groundwater storage tank adjacent to the building. The building and associated structures have been used as the booster station for fire suppression since its initial construction. It is not known to be contaminated with radioactive or energetic materials.

Bldg 19 - Salvage & Sales 1,500sf
The facility is a metal jumbo Quonset hut with interior offices/areas/walls. It has a slab-on-grade floor with a 1,500-squarefoot mezzanine. The building services include two forced-air propane heaters, two small electric heaters, a window air conditioner in the small office area, and electric service of 240V along with water and sewer service. The building was initially used for Mound salvage storage and salvage sales. Currently, the building contains a small office cubicle staffed by Waste Management personnel. The remainder of the building is used as an investigative-derived materials (IDM) storage facility and as a preparation/packaging facility for samples involving CERCLA project activities.

Bldg 72 Hazardous Waste Storage 2,400sf
The building is a slab-on-grade steel-frame building with a metal roof. The building has electrical service of 240V and is supplied with service water only. No heat or cooling is supplied to the building. The building has three bays, with a dry sump under each bay to collect spillage. The sump's contents are pumped to drums. An interior masonry wall provides extra protection for the storage of explosive materials. The facility includes various exterior loading areas and staging areas considered as part of this structure. Building 72 was designed for and has been

used for hazardous waste storage since it was constructed.

Bldg 124 Central Waste Processing Facility 5,310sf
This facility is a temporary Rubb Manufactured Building. It has been erected on an 8-inch reinforced concrete slab. The facility has a HEPA filtration system. The building is supplied with 480V electrical service. All other services is self-contained within the equipment in the building. The facility is used for size-reducing waste from site removals that contain both radioactive and chemical contamination. The facility houses a box repackaging area, plasma arc cutting station, a blasting room, and a compactor station.

Bldg 94 Materials Compatibility 1,800sf
The building is a slab-on-grade prefabricated metal building with a metal roof. The inside of the building is divided into three bays. Building 94 was used for CERCLA environmental program contractor staging and for soil and water sample storage. The building originally housed a laboratory in one bay and environmental ovens in the other two bays. Investigations related to materials compatibility were conducted using energetic materials. The building has been decontaminated and is currently vacant.

Bldg 57 Sanitary Sewage Disposal Plant 510sf
The facility is a concrete block structure with a built-up membrane (coal tar) roof. A 1,000-gallon fuel storage was installed in 1974. The fiberglass-reinforced plastic AST has secondary containment. The building has been used as for its intended purpose as the control room/lab for the Sanitary Sewer Plant since its initial construction. One of six buildings (with one unnumbered tent structure) comprising the Mound Wastewater Treatment Plant (MWWTP), commonly referred to as the Sanitary Disposal (SD) Facility. The MWWTP is classified as a single-stage system comprised of an advanced secondary treatment process. A tertiary treatment stage has been added to the liquid treatment process.

Bldg EG-8 Standby Generator
Building EG-8 contains an electric generator and is attached to Building 57. Building EG-8 is a concrete block slab-on-grade structure with a built-up membrane (coal tar) roof. This facility houses an emergency generator and is one of six buildings (with one unnumbered tent structure) which comprise the Mound Wastewater Treatment Plant (MWWTP), commonly referred to as the
Sanitary Disposal (SD) Facility. The MWWTP is classified as a singlestage system comprised of an advanced secondary treatment process. A tertiary treatment stage has been added to the liquid treatment process.

Bldg 112 Sand Filters Building 785sf
The facility is a steel-framed structure with metal sides and roof that sits on a concrete pad. Heating and electrical service is provided to this structure. A 100-square-foot metal shed near Building 112 contains chemicals and is contained within the scope of this building (though sq. ft. for this metal shed is not included in sq. ft. column). Building 112 contains equipment filters and effluent treatment, testing, and monitoring. Building 112, constructed in 1985, is a 800-

square-foot Heating and electrical service is provided to this structure. The shed near Building 112 contains chemicals. This is one of six buildings (with one unnumbered tent structure) which comprise the Mound Wastewater Treatment Plant (MWWTP), commonly referred to as the Sanitary Disposal (SD) Facility. The MWWTP is classified as a single-stage system comprised of an advanced secondary treatment process. A tertiary treatment stage has been added to the liquid treatment process.

Bldg 113 Dewatering Building 547sf
The facility is a steel-framed structure with metal sides and roof set on a concrete pad and has electrical and heating provided. Building 113 contains dewatering equipment and is used for chemical and equipment storage This is one of six buildings (with one unnumbered tent structure) which comprise the Mound Wastewater Treatment Plant (MWWTP), commonly referred to as the Sanitary Disposal (SD) Facility. The MWWTP is classified as a single-stage system comprised of an advanced secondary treatment process. A tertiary treatment stage has been added to the liquid treatment process.

Bldg 415 Metal building adjacent to Bldg 113 400sf
The building is steel-framed with metal sides and roofs, and has a concrete slab on-grade flooring. Building 415 is used for chemical and equipment storage. This is one of six buildings (with one unnumbered tent structure) which comprise the Mound Wastewater Treatment Plant (MWWTP), commonly referred to as the Sanitary Disposal (SD) Facility. The MWWTP is classified as a single-stage system comprised of an advanced secondary treatment process. A tertiary treatment stage has been added to the liquid treatment process.

Bldg 432 Sands Filters Building 192sf
The building is concrete slab-on-ground steel frame structure with metal sides and roof. Building 432 contains equipment to test samples of water. This is one of six buildings (with one unnumbered tent structure) which comprise the Mound Wastewater Treatment Plant (MWWTP), commonly referred to as the Sanitary Disposal (SD) Facility. The MWWTP is classified as a single-stage system comprised of an advanced secondary treatment process. A tertiary treatment stage has been added to the liquid treatment process.

Railspur
The railspur consists of railroad tracks and two waste pits. Low level waste is placed into the pits, loaded into railcars, and then shipped to envirocare, located in Utah.

Bldg 24 Water Treatment Plant Building 840sf
The facility is a concrete block structure built with slab-on-grade floor with built up membrane roof. The facility contains two large-capacity (100,000-gallon) zeolite softening beds plus the chemicals and injection equipment for chlorination and rust inhibition. The building also contains two high-capacity booster pumps to distribute the treated water. The facility was constructed for the purpose of treating raw well water and has been used for the same purpose since construction.

Bldg PH Pump House 646sf

The building is a concrete block structure with built-up membrane roof and slab on grade flooring. The facility has central steam heat, a window unit air conditioner, and 480V three-phase power. The brine line for the Building 24 zeolite softening bed recharge passes through Building PH.
It originally housed fuel oil pumps to supply the power house with fuel from a nearby tank (now demolished). It now houses a steam condensate pump and is used for storage. The facility no longer serves its original design intent and the pumps have been removed. It now houses a steam line condensate pump and is used for miscellaneous storage of powerhouse supplies and some contractor supplies. No research, development, or production activities using radioactive or energetic materials have occurred in the building. The environmental appraisal shows that the building contains asbestos.

Bldg 104 Maintenance Shop 1,800sf
The facility is a one-story, 1,800-square-foot, steel frame structure with steel siding and roof. It is a slab-on-grade structure with a loading dock and ramp. The structure contains offices, a lavatory, and open shop space. The building has centralized utilities steam and chilled water along with 240 volt electrical service, potable water, sewer. The facility served as the maintenance shop for the test fire area and contained office areas and electronics and small parts assembly room, parts storage, and a fabrication/maintenance shop. No research, development, or production activities using radioactive or energetic materials have occurred in the building.

Bldg 49 Explosive Fabrication Facility 14,929sf
The facility is a one-story reinforced concrete, slab-on-grade structure with a built-up membrane (coal tar) roof. (Services) The building contains production laboratories, office lavatories, a locker room, storage, and a large staging area. Production activities using energetic materials have occurred in the building. The building has been used for the same purpose since its construction in 1971. Research, development, and testing activities using radioactive materials have not been known to have occurred in the building. The MMCIC is currently leasing the building for the processing of explosives, but building lease is assumed to terminated by January 1, 2003.

Bldg 34 Emergency Brigade Training Facility 1,111sf
The facility is a concrete block and metal structure with a concrete and metal roof and concrete floor. A burn pit and burn areas are located on the southern side of the building and is considered part of this structure which requires demolition. The building served as the old burn building, an area formerly used for training Mound firefighters. Various fuels and flammable materials were burned to simulate potential emergency situations. The current use of the facility is as the soils counting lab.

Bldg 300 OU-1 Pump & Treat 270sf
The building is a prefabricated metal structure built with slab-on-grade. The building houses the OU-1 pump and treat system using an air stripper for VOCs. The facility is not supplied with utilities other than 480V, three-phase power to run the system and provide electric space heat. The building houses the OU-1 pump and treat system using an air stripper for VOCs. It has been used for the same purpose since construction.

Bldg 301 OU-1 Pump & Treat 328sf
The facility is a prefabricated metal structure on skids. The facility is not supplied with utilities other than 480V, three-phase power to run the system and provide electric heat. The building houses the OU-1 air sparging/soil vapor extraction process. It has been used for the same purpose since construction.

Bldg 301A OU-1 Pump & Treat 32sf
Building 301A is a converted prefabricated guard post building with electrical service. The facility houses a gas chromatograph to analyze gases removed in the air sparging/soil vapor extraction process in Building 300.

WH1 Deep Well House #1 374sf
WH-1, a well house, is a slab-on-grade floor with concrete block wells and a metal roof. The facility is not supplied with utilities other than 480V, three-phase power to run the water well pump and an electric space heater. The building since its initial construction has covered the well and houses a pump to help supply water to the Mound facility.

WH2 Deep Well House #2 374sf
WH-2, a well house, is a concrete slab-on-grade with masonry exterior walls and a built-up membrane roof. The facility has no utilities other than 480V, three-phase power to run the water well pump and an electric space heater. A propane-fueled, standby, direct-drive engine is hooked to the pump to provide power during electrical power outages. The building covers a well and pump that helps furnish water to the Mound facility. It has been used for the same purpose since construction.

WH3 Deep Well House #3 374sf
WH-3, a well house, is a concrete slab-on-grade floor with masonry exterior walls and a built-up membrane roof. The facility has no utilities other than 480V, three-phase power to run the water well pump and an electric space heater. There is a propane-fueled, direct-drive engine to provide standby power during electrical power outages. This building covers a well and pump that provides plant water supply to the Mound facility. It has been used for the same purpose since construction.

Crusher
The crusher is used to crush clean (non-radioactive) concrete debris. Chunks of concrete are loaded into a hopper and then crushed into finer material. Re-bar is handled by the crusher and segregated from the crushed stone. Re-bar is cut out of the concrete chunks to the extent possible.

Bldg 30 Health Physics (SM Storage Bld.) 740sf
The facility is a concrete block structure slab-on -grade floor and a built up membrane roof. Currently, there is electrical service of 240V. An argon bulk storage tanks is within 100 feet of this facility and is considered part of the facility. The building houses a radiological counting laboratory. Liquid scintillation counting is used to count paper smear samples for the detection of tritium and gross alpha/beta activity. Several years ago Building 30 was converted from use as an office/storage area to a counting laboratory. The building previously housed a gamma scan

facility for drums and boxes. Currently, one-third of the building is used for laboratory analysis; it is a radiological buffer area. The remaining area, a controlled area, is used for storage of supplies used in the laboratory.

Bldg 31 TRU Waste Storage (SM Area) 6,090sf
The facility is a prefabricated metal building with a metal roof and slab-on-grade floor. The facility has heating and air conditioning systems of central steam and chilled water. The building has a fire sprinkler system. Ancillary concrete slabs and loading docks are considered to be part of this building and are to be removed. The building has been and is used for storage of radiological waste in sealed containers.

Bldg 31A TRU Waste Storage (SM Area) 2,650sf
Building 31A is a prefabricated metal building with a metal roof and slab-on-grade flooring. The building has a fire sprinkler system. Ancillary concrete slabs and loading docks are considered to be part of this building and are to be removed. The building was originally built as a low specific activity (LSA) and transuranic (TRU) waste storage facility. No research, development, or production activities using radioactive or energetic materials have occurred in the building. The building is currently used to store materials associated with the RTG program.

Bldg 36 PST Assembly & Testing Support 4,255sf
The facility is a one-story slab-on-grade structure constructed of concrete block with a penthouse. The roof is a metal deck with built-up membrane of asphalt. The building is serviced by central steam for heat chilled water, and electrical service of 480V. Room 3 has been renovated and all that remains in it is a fumehood. The building is used to support general purpose heat source testing operations. Operations conducted in the building are high-temperature bakeout of graphite modules and cleaning. No research, development, or production activities using radioactive or energetic materials have been known to have occurred in the building.

Bldg 37 Heat Source Testing 2,464sf
The facility is a one-story slab-on-grade structure built of concrete block with a penthouse. The roof is a metal built-up membrane of asphalt. The building has central steam for heat, chilled water, and electrical service of 480V. Building 37 was used for two purposes. One use was research, development, and production in conjunction with the US Advance Battery Consortium. The other use was converting processes with freon or other hazardous materials to processes that use safer materials. The building has now been converted to a machine shop in support of the heat source program. The activities being performed are machining, cleaning, heat treating, and inspection. No research, development, or production activities using radiation or energetic materials have been known to have occurred in the building

Bldg 50 PST Assembly & Testing 14,849sf
Building 50 is the radioisotopic thermoelectric generator (RTG) assembly and testing facility. slab-on-grade concrete and concrete block structure with a built-up membrane bituminous material roof and includes two bulk nitrogen tanks external to building. There is electrical service of 480V. Heating and air conditioning systems are central steam and chilled water. The building has a fire sprinkler system except for working cells 108, 109, 110, 111 and 113. The

cells are set up for personnel protection during assembly operations utilizing encapsulated Pu. The building is supplied with service water and potable water. The first floor of the structure is a process area for the assembly of RTGs. RTGs are sealed contained radioactive sources. The building is segregated into two areas, a buffer area where RTG assembly and storage is conducted and a controlled area, where support activities occur . The second floor penthouse houses utility services.

This is a Hazard Category 3 Nuclear facility with one pass through ventilation through filter banks exhausting to the atmosphere.

The building has a current FSAR for handling encapsulated Pu-238. There is no contamination and all Pu-238 has been removed.

The Safety Significant Systems include the Building 50 structure and a glove box in room 204.

Bldg SM Pu Processing Building
SM was a large building that processed radioactive materials. It was demolished in the 1990s with approximately 60-100 linear feet of foundation remaining near the PP/Bldg 38 stack in order to prevent the undermining of the stack. The residual foundation wall and footing resides at a depth of 4 to 6 feet below current grade.

Bldg 33 Storage Facility 2,064sf
The building superstructure was removed in the 1990's with the (1200 sq. ft.) slab and foundations (the foundation walls extend 5 ' above grade on one side) remaining in place for later removal. Associated adjacent pads are included within this description including a 12' by 60' concrete slab on grade and another, 12' by 12'.

Bldg 38 PP Building (Plutonium Processing) 44,327sf
The facility is a two story structure with the lower level of constructed of reinforced concrete and prestressed concrete and the upper-level constructed of concrete block. The roof is prestressed concrete with a built-up membrane of asphalt. The following additions have been made to the original structure: (1) a men's change room, 1,764 sq. ft.; (2) a low level liquid waste facility and tanker loading pad, 547 sq. ft.; (3) a waste solidification facility, 2,184 sq. ft.; and (4) two 360 sq. ft. dock towers with an overhead rail crane in each. Building 38, also called PP (Plutonium Processing) Building, was formerly used as a Pu-238 production processing facility, the assembly
and testing of Radioisotopic Thermoelectric Generators (RTGs), the repackaging and storage of excess nuclear material, and the storage and identification of orphan sources from Mound. A sub-contract is ongoing for the demolition of this facility. Demolition is to be complete to slab which remains. Building debris is stored at adjacent site by subcontractor for prime to disposition.

This is a radiological building with one pass through ventilation exhausting thorough filter banks to the Bldg. 38 stack. Suspected Pu-238 contamination in building structures.

The building has an auditable safety analysis document and therefore no Significant Safety Systems. Systems important to safety include the ventilation system, filter banks, sump and the stack.

Level D clothing requirements (ie; safety glasses, safety shoes, hard hat, etc.)

Critical rooms include;

142W – Houses F-line which processed Pu-238 laden parts. Some radiological contamination present.

Radiological contaminated rooms;
115 – A-line, Processed a wide variety of radioisotopes. Radiological contaminated glove box line removed in 2001.
6E & W – Contains filter bank ,sumps and a box handling facility.

Bldg 38-Stack Building 38 Stack 201sf
The Building 38 Stack is a masonry process exhaust stack. The stack is 200 feet tall with an outer diameter of approximately 16 feet at the base that tapers to an outer diameter of approximately 7 feet a the top. The wall thickness is 18 inches at the base and 8 inches at the top. The stack is constructed of bricks and mortar, reinforced with wire mesh and reinforcing steel. It is coated on the inside with Gilsonite. The stack is supported by a reinforced concrete base pad that is 8 ft. deep in three steps of 4, 2 and 2 ft. In addition two structural steel platforms are located on the stack . The stack includes the 40 inch diameter exhaust duct and associated support structure from Bldg. 38 to the plenum. The ductwork in generally 1/8' welded carbon steel. The facility served SM Building prior to that building's demolition. It currently serves Building 38 and is approximately 70 feet from that facility and was used to exhaust building and process air to the
environment. A sub-contract is ongoing for the demolition of this facility. Demolition is to be complete to slab which remains. Building debris is stored at adjacent site by subcontractor for prime to disposition.

Bldg 95 SM/PP Chiller Complex 2,860sf
The Building 95 unit, containing Utilities Operations, consists of the main structure and its two annex buildings, 95A and 95B. All buildings are one-story. The three buildings are Butler metal prefabricated structures with metal roofs and built slab-on-grade flooring with foundations. Gravel parking and grass surround the main building. The unit's evaporator tower (considered part of the "facility") is to the northwest. The building has heating and air conditioning systems and electric service of 480V. Building 95 includes a 500-ton Trane chiller and an additional 800-ton chiller along with pump capacity and underground chilled water lines which were extended to the Test Fire Area. Secondary equipment was installed with each chiller, including cooling towers, chilled water pumps and condenser water pumps in Building 95B, and chemical treatment in Building 95A. This facility provide chilled water to both the SM/PP Hill and Test Fire area. Hot water was produced for heating through heat exchangers from steam from P Building. The buildings was used for the same purpose since construction.

Script for SW and R Buildings

- **TALKING POINT 1**

  (R BUILDING GENERAL) R or Research Building is a single-story structure, with a penthouse, constructed of concrete block with brick facing. The roof is metal with a built-up membrane of coal tar. R Building, one of the original buildings constructed in 1948, is located on the Main Hill and is connected to SW Building with shared infrastructure. Together, R and SW Buildings form the Semi-Works and Research (SW/R) Tritium Complex. The R Building penthouse contains a high-efficiency particulate air (HEPA) filter bank and associated ductwork connecting it to the T-West stack. The building has central steam for heat, chilled water, and electrical service of 480V.

  The building contains laboratories (for both radioactive and non-radioactive works), offices and service rooms. The "hot" side is associated with radiological areas, in particular, areas used for tritium recovery, rooms in which plutonium work was conducted and discontinued and rooms used for various analytical support activities. The cold side of the building contained research and development laboratories, analytical laboratories, a respirator fitting facility, offices, and the library

- **WALK INTO R ANNEX AND BACK OUT**

- **TALKING POINT 2**

  (Corridor 5) This corridor is used for the staging and removal of the R-140 Gloveboxes. The drains and sumps running under Corridor 5 will need to be removed.

- **TALKING POINT 3**

  (R-142) The drain line in this room will need to be dug up and removed. The enclosure constructed was used to assist in the removal of the R-140 gloveboxes and during the removal of the drain line.

- **TURN LEFT AT CORRIDOR 4**

- **TALKING POINT 4**

  (R-167/168/169) These rooms were used as a radio-counting room to determine the activities of the various radioisotopes used in this building. This is a Limited Area.

- **TURN RIGHT CORRIDOR 6**

- **TURN LEFT CORRIDOR 7**

- **DEAD-END TURNAROUND**

- **TALKING POINT 5**

  This room was used as the library.

- **TALKING POINT 6**

  (R-108/110) This room is the tritium recovery laboratory and is a current operating laboratory. The lab is responsible for recovery of tritium from tritium contaminated and tritium containing components through a thermal reaction process. Components removed from various locations of SW, R and T Buildings during safe shutdown activities are processed in this room.

- **TURN RIGHT INTO CORRIDOR 2A**

- **TALKING POINT 6A**

  (SW-17/18/19 – OLD CAVE) The Old Cave is the entombed remains of a hot cell used to process radium and actinium in the 1950's. The process was terminated and the area was later entombed in 1959. The size of the entombed area is approximately 30 feet by 50 feet. The exact radiological inventories and physical items that may be buried within the entombment are unknown. A conservative estimate indicates that a maximum of 5 curies actinium and 12 curies of Radium could still be present. The radiological hazards and the potential hazards associated with the separation process make the D&D of this area a great challenge from the perspectives of worker and environmental protection.

- **TURNAROUND IN CORRIDOR 2**

- **TALKING POINT 7**

  (R-127) This room was used as a facility where components would be monitored for radiation.

  (R-128) This room is an analytical lab that was used to perform contaminant and surface area analysis, differential analysis, infrared spectrometry, ion chromatography, etc…

  (R-130) This was the analytical lab that supported the heat source program.

- **TALKING POINT 8**

  (R-129) This room is the access point to R-128/130.

- **TURN LEFT IN CORRIDOR 157 TO ACCESS SW BUILDING**

- **TALKING POINT 9**

  (SW GENERAL) The SW or Semi-Works Building is a two-story structure, with a penthouse, constructed of concrete block with brick facing. The roof is metal with built-up membrane of carboline, asphalt, and coal tar. Originally constructed in 1950, Building SW has undergone 13 major additions. The building has central steam for heat, chilled water, and electrical service of 480V.

  The building contains HEPA filters and alpha and beta hot drains. SW Building shares the common infrastructure with R Building. Together, R and SW Buildings form the Semi-Works and Research (SW/R) Tritium Complex. Two nitrogen bulk gas storage tanks are considered to be part of this facility.

- **TURN RIGHT BEFORE MAP IN CORRIDOR 157B**

- **TALKING POINT 10**

  (SW-147) This room was a metrology lab used for the inspection of materials, measurement, and smoothness determination.

- **TURN RIGHT CORRIDOR 154**

- **TALKING POINT 11**

  (SW-149) This room was used to receive, store, analyze, and solidify wastewater and oil which were contaminated with tritium.

- **TALKING POINT 12**

  (SW-150) In this room tritium and deuterium research and development was conducted with gas synthesis systems in association with various metals.

- **GO STRAIGHT TO SW-13**

- **TALKING POINT 13**

  (SW-13) Currently, this room will be used to access the Old Cave in SW-19. Holes are being drilled in the floor to characterize the contaminants under the floor and around the old cave.

- **GO UP STEPS**

- **TURN RIGHT INTO CORRIDOR 206**

- **GO UP STEPS**

- **TALKING POINT 14**

  (SW-238) These are labs that were used for the development of system prototypes, component testing, welding operations, and calorimetry. Simulation testing of long term storage and environmental concerns were also done.

- **TURN AROUND AT STAIRS**

- **TALKING POINT 15**

  (SW-240) These are labs were used for the development of system prototypes, component testing, welding operations, and calorimetry. Simulation testing of long term storage and environmental concerns were also done.

- **TALKING POINT 16**

  (SW-231) This room contains the Tower Dryers.

- **GO DOWN STEPS**

- **TALKING POINT 17**

  (SW-219) This room was a plutonium/neutron source production area used to manufacture neutron sources.

- **TURN RIGHT**

- **TURN RIGHT**

- **GO TO SW-210 WALK-IN HOOD**

- **TURN AROUND AND GO TO BREAK ROOM**

- **TURN RIGHT AND GO UP STAIRS TO SW-208**

- **TURN RIGHT AND BACK DOWN STRAIRS**

- **TURN LEFT AND GO INTO SW-142**

- **IN BACK OF ROOM GO INTO NEW CAVE (DO NOT LET DOOR CLOSE)**

- **TALKING POINT 18**

  (SW-140 – NEW CAVE) The New Cave and laboratory area was the primary room consisting of a hot side with fumehoods and two ion exchange columns. The analytical side was used to obtain disintegration counts using alpha, gamma, and proportional counters. Area was used most recently for repackaging of U-233 for removal from the site.

  The original transuranic processing operations in this area were terminated more than 10 years ago. Since then, the area has been used minimally except for storage. The majority of the safe shutdown in this area is completed.

- **GO OUT OF ROOM SW-142**

- **GO OUT CORRIDOR 154 AND EXIT BUILDING**

- **GO TO SOUTH END OF BUILDING AND SWIPE BACK IN AT SW-20**

- **EXIT BACK OUT SW-20**

- **END OF MORNING TOUR – Go to OSE Lobby**

Script for Buildings 58 and SW/R Penthouses

- **TALKING POINT 18A**

  (BUILDING 58 GENERAL) Building 58 is an elevated one-story, steel-frame building with brick face exterior. The roof is a metal deck with a built-up membrane with asphalt. Access to the building is from the roof of Building SW. The building has central steam for heat, chilled water, and electrical service of 480V. Electrical service of 12KV is provided to the SW Substation, which is part of Building 58. The building contains ventilation equipment possibly contaminated with radioactive materials. The adjacent ~100 ft. metal ventilation stack and stackhouse is considered a part of this facility.

  Building 58 is the alpha and beta filter bank and plenum exhaust for Building SW. A HEPA filtration system is used to filter out alpha and beta particulate from the exhaust of several rooms in Building SW. The building has been used for the same purpose since construction.

- **TOUR OF SW/R PENTHOUSES AND BUILDING 58 – PPE required.**

- **REASSEMBLE TOUR GROUP AT T BUILDING WEST TOWER**

Script for T Building

- **TALKING POINT 18B**

  (T BUILDING GENERAL) T or Technical Building is a heavily reinforced subterranean concrete structure located under the Development and Standards (DS) Building. Only the South-end section of the building tunnel area is aboveground and abuts the multi-story Central Operations Support (COS) building. These two buildings are separated from each other by an approximate 6-in. expansion joint. Construction of T Buildings was completed in 1948. The building has two floors. Each floor is compartmentalized into three general areas by two 30-in. thick reinforced concrete firewalls. The building also includes two exhaust airshafts and two 200-foot-tall brick and mortar exhaust stacks, which are slated for demolition along with the ancillary stack house. The building was constructed by excavating the side of a hill, assembling the reinforced concrete building shell and then backfilling the excavated area to essentially the original slope and height. The exterior walls and the roof are about 16 feet thick. The roof was designed to resist damage from a 2,000-pound semi-armor piercing jet-assisted aerial bomb.

  The floor structure was built to withstand an explosion of a bomb at some point below the floor should it reach that point by a curved path through the soil surrounding the building. The interior dimensions of the building shell are 345 ft long by 150 ft wide. The roof's overburden is a nominal 3ft with DS Building on top of most of the building footprint. Access to the building is through elevator towers either at the East and West ends of the building or by a service tunnel. Two towers are located at either end along the North wall of the main building shell. These towers contain stairways, passenger elevators and air shafts. The air required for the ventilation of the building enters at the penthouse level of each individual tower. The East Tower also provides space for various utility lines coming into the building. Service tunnels have large doors, which permit vehicles and personnel to enter the building at either end of the second floor. The tunnel doors and the tower entrances were “steel blast doors”, which are designed to withstand a blast equivalent to five (5) pounds per square inch. The central steam system is utilized for heat. A chilled water station and an electrical substation, within the structure, service the building.

  This building is currently slated to be transitioned to the MMCIC.

- **GO TO SECOND FLOOR**

- **TURN RIGHT AT CORRIDOR 22**

- **TURN LEFT AT CORRIDOR 20B**

- **TALKING POINT 19**

  (T-266) This lab was used for the polonium processing steps after the initial dissolution and concentration steps.

  (T-274) This lab was used for the development of new methods of processing the bismuth slugs.

- **TALKING POINT 20**

  (TERF) Currently, the Tritium Effluent Reduction Facility (TERF) continues generating tritiated water during its operations. The quantity of tritiated water generated varies from month to month. The average generation rate is about 25,000 curies of tritium per month. The tritiated water then goes to T-61 to be solidified and then gets shipped to the Nevada Test Site.

- **TALKING POINT 21**

  (T-61/63) The Tritium Aqueous Waste Recovery System (TAWRS) was part of the Tritium Recycle and Enrichment System. It was online in 1989 and shut down after 6 months.

- **TALKING POINT 22**

  (T-57/58/59) The Hydrogen Isotope Separation System (HISS) was part of the Tritium Recycle and Enrichment System. Because of the size of the equipment, the system extends through the floors up into T-274.

- **TALKING POINT 23**

  (T-48/49/50) T-48 and T-50 were glovebox labs and T-49 is an access corridor to both. They contain gas preparation systems used to handle large quantities of tritium. T-49 is an access corridor for equipment maintenance.

- **TALKING POINT 24**

  (T-43) Currently, this room is a pilot project for removing of concrete slab. In addition, T-40/41/and 44 will need the concrete slab removed. The slab covers contaminated drains and sumps.

- **TALKING POINT 25**

  (T-22) This room was a safeguards verification facility lab containing calorimetric, thermal neutron, and gamma-ray spectroscopy systems.

  (T-27) This room was used for unpackaging of radionuclides for use in T-22.

- **TALKING POINT 26**

  (T-20) This room is used as a Classified Waste storage area.

- **GO RIGHT TO CORRIDOR 1A**

- **LOOP BACK TO TALKING POINT 26**

- **GO LEFT TO ELEVATORS**

- **GO TO 5th FLOOR**

- **END OF TOUR – Go to OSE Lobby**